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FINAL REPORT
EVALUATION OF CHEMICAL AND ATMOSPHERIC SCIENCES RESEARCH
DR. JOSEPH E. EARLEY

APDR-TR- 83-1555

F49620-81-C-0085

GEORGETOWN UNIVERSITY
DEPARTMENT OF CHEMISTRY
WASHINGTON, D.C. 20057

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10 September 1981 - 9 September 1984

Georgetown University
Department of Chemistry

Final Technical Report
Contract F49628-81-C-0085

U.S. Air Force Office of Scientific Research
For the period September 1, 1981 to September 9, 1984

During the period covered by this report, six plenary meetings of the Chemistry Research-evaluation Panel for AFOSR have been held. The sixty-third chemistry research evaluation meeting for AFOSR was held at the U.S. Air Force Academy, Colorado on November 12 and 13, 1981; thirty-nine proposals were considered at that meeting, and relative rankings for scientific quality were determined. An interim technical report specifying that rank-order has been submitted and is appended as Appendix I. The sixty-fourth chemistry research-evaluation meeting for AFOSR was held at Alexandria, Virginia, on May 13 and 14, 1982; fifty proposals were considered at that meeting, and relative rankings for scientific quality were determined. An interim technical report specifying that rank-order has been submitted and is appended as Appendix II. The sixty-fifth chemistry research-evaluation meeting for AFOSR was held at New Orleans, Louisiana on November 11 and 12, 1982; thirty-five proposals were considered at that meeting, and relative rankings for scientific

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Keywords: *Threats to
Chemistry - (CR)*

quality were determined. An interim technical report specifying that rank-order has been submitted and is appended as Appendix III. The sixty-sixth chemistry research-evaluation meeting for AFOSR was held at Washington D.C. on May 12 and 13, 1983; forty-seven proposals were considered at that meeting, and relative rankings for scientific quality were determined. An interim technical report specifying that rank-order has been submitted and is appended as Appendix IV. The sixty-seventh chemistry research-evaluation meeting was held at San Antonio, Texas on November 10 and 11, 1983; thirty-four proposals were considered at that meeting, and relative rankings for scientific quality were determined. An interim technical report specifying that rank-order has been submitted and is appended as Appendix V. The sixty-eighth chemistry research-evaluation meeting was held at Georgetown University on May 10 and 11, 1984; forty-eight proposals were considered at that meeting, and relative rankings for scientific quality were determined. An interim technical report has been submitted and is appended as Appendix VI. During the period of this report, a total of two hundred and fifty-three chemical proposals were reviewed and ranked.

Panels of evaluators were provided for five contractors' meetings that dealt with specific portions of the ongoing AFOSR research program. These meetings were held as follows: Buffalo, New York, May 6-7, 1981; Albuquerque, New Mexico, November 9-11, 1981; Buffalo, New York, May 6-7, 1982; Air Force Academy, Colo. December 1-3, 1982; Hanscom AFB, Mass., October 26-28, 1983. Interim technical reports covering each of these meetings have

been submitted.

Procedures for evaluating atmospheric-sciences research proposals have been developed and refined. Interim Technical Reports dealing with that activity have been submitted. Overall grades are included in appendices I, II, III, IV, V, VI. In total, two hundred and fifty-three chemical and thirty-six atmospheric proposals were evaluated of which three earned the overall rating of A+, one of A/A+, thirty-five of A, five of A/A-, sixty of A-, thirty-three of A-/B+, one of A-/B, three of A/B, seventy-three of B+, eleven of B/B+, forty-seven of B, two of B-, one of B-/C, two of C+, twelve of C or R.

Panel members who served during the period of this report are:

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Pennsylvania State University
University Park, Pa. 16802

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Submitted by,


Joseph E. Earley
Professor and Chairman

Principal Investigator
Contract F496281-C-0085

November 1, 1984

Appendix I

Georgetown University INTERIM TECHNICAL REPORT F49628-81-C-0085

Final Ranking

63rd Chemistry Research Evaluation Meeting
Air Force Office of Scientific Research

I	II	III
	A-/A 72 Ols	
A 45 Mess	A 79 Yates 64 Stwalley	A 79 Yates
A/A- 48 Seyferth	A/A- 54 Burnett	
A- 66 Patner and Whitmore 70 Abrahamson 81 Skell 85 Laon 51 Shreeve	A- 53 Davis and Alexander 68 Kuppermann 62 Schwerzel and Epstein	A- 83 Rinaldi 59 Chu(a) 62 Schwerzel and Epstein 74 Davis, Mattemo, and Vendiles
A-/B+ 77 Baum	A-/B+ 78 Golden and Rossi 61 Berry	
B+ 46 Rosenthal	B+ 71 Porter 73 DePristo	B+ 83 Sung(a) 57 Mulvaney 84 Schultz
B-/B 56 Crouch 60 Carper 65 Davis and Liu		B-/B 58 Kelley and Morton c 63 Stevenson, Legg, and Rihovsky(a) 80 Couchman and Scheinbaum
B 47 Nandi 50 To 55 Green and Paul	B 46 Crouch 70 Lynds and Michels c 55 Green and Paul 65 Davis and Liu 75 Bernasek and Draper 67 Robinson	B 75 Bernasek and Draper

Not Rated:
69 Guillemingh and Dickens(b)

(a) Tentative ranking, pending (b) Rewrite Recommended
additional evaluation

November 13, 1981
U.S. Air Force Academy, Colorado

(c) Equal Ranking

Appendix II

Georgetown University

INTERIM TECHNICAL REPORT F49628-81-C-0085

Final Ranking

64th Chemistry Research Evaluation Meeting
Air Force Office of Scientific Research

I and III

- A
26 Kramer
- A/A-
33 Fristad
44 Lemal
50 Bruckenstein
- A-
10 Conradi
20 Trogler
12 Finklea
23 Dewar
46 Baldeschwieler *
- A-/B+
08 Houk
13 Newman and Scheinbeim
21 Goodenough and Dickens
- B+
25 Diott
49 Weber
32 White
38 Mark
29 Taft
30 Anderman *
42 Stegeman et al.
31 Cukler
11 Raleigh
16 Dresselhaus

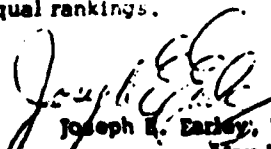
II

- A
22 Leone
41 Wittig
17 Crim.
- A-
18 Houston
34 Dyke
05 Cavanagh
19 Benziger
36 Engel
15 Yarkony
14 Raff
40 Steinfeld
- A-/B+
01 Greene
39 Rabitz
45 Redmon
43 Dows
02 Kouri
- B+
48 Becker
03 Herbst
37 DePristo
07 Rosenfeld

- C
04 Haydock
06 McCluskey

Asterisk indicates tentative
ranking, pending additional review.

Brackets indicate equal rankings.


Joseph A. Early, Principal Investigator
May 14, 1982
Alexandria, Virginia

Appendix III

Georgetown University
INTERIM TECHNICAL REPORT
F49628-81-C-0085


Final Ranking

65th Chemistry Research-Evaluation Meeting
Air Force Office of Scientific Research

<u>I and III</u>		<u>II</u>	
A+	72 Collman-Anson	A+,A	67 Levy 86 White
A	93 Katz	A	64 Dyke 98 Golde
A-	70 Bedford-Thompson	A-	60 Mayer 66 Setser 99 McGowan
A-/B+	71 Dolbier 75 Hall 97 Krigbaum-Preston	A-/B+	69 Barker 100 Pritchard 058 Tellinghausen 065 Halpern 84 Schwarz*
B+	63 Molloy 76 Mulvenay 79 Jones 96 Nicholson 95 Ring-O'Neal*	B+	56 Alfano 85 Davidovits 91 Heaven 57 Hichen 78 Lester
B/B+	77 Miller		
B	61 Harris 62 Lardner 88 Otter	B	74 Fry 90 Benard
		C	59 Yang

Asterisk * indicates tentative ranking, pending further evaluation, not ranked relative to others in the same group.

Ampersand & indicates equal evaluations (tie rankings).


Joseph E. Earley
Principal Investigator
November 12, 1982
New Orleans, Louisiana

GEORGETOWN UNIVERSITY
DEPARTMENT OF CHEMISTRY

INTIRIM TECHNICAL REPORT FOR AFOSR RESEARCH-EVALUATION

CATEGORY I

CATEGORY II

A 38 Boudjouk
20 Matsamune

19) Turro
02) Angell

A- 13 King
5 Hughes
42 Weitz
32 Donald
27 Grubb
16 Hansen

A-/B+ 25 Michl
12 Stille

B+ 39 Moriarity
31 Collins
18 Shiner
3 Hieftje
1 Geil
49 Niedenzu

B/B+ 4 Marchand
9 Tuazon

B 24 Maddou
23 Winefordner

C 28 Agarwal

11 Stair
45 Burnett
36 Mosely
15) Dagdigian
22) Eisenthal
14) Rabitz
50 Murray *

41 Heidner
42 Weitz
37 Wang
34 Hanson #
46 Ratner

44 Weiss
43 Adams
17 Campion
29 Michels
48 Benesch

26 El Batoumy

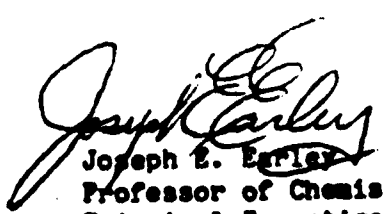
33 Thompson
21) Lauer
30) Menzer
40) Salk
7 Lin

8 Su

) equal ranking

* preliminary study only approved

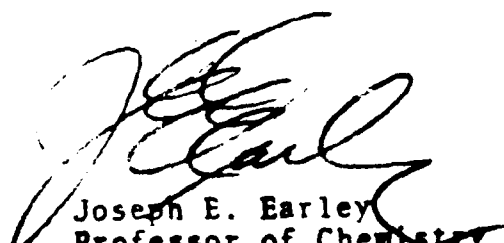
additional review suggested


Joseph E. Earley
Professor of Chemistry
Principal Investigator
May 13, 1983

Appendix V
Georgetown University
Department of Chemistry

Revised Interim Technical Report for AFOSR Research-Evaluation

	CATEGORY I	CATEGORY II
A	75 Allcock	74) Fenn 80) Leone 87 Siehener
A-	89) Osteryoung 63) Pope	70 Julienne 86 Ross* 79 Skofronick, Safron#
A-/B+	65) Green 71) Royce	69 Bauer 68) Guberman 78) Jordon 67 Rich
A/B	81 Klein**	
B+	64 Bray 60 Suter 76 Sievers 73 Yoke 82 Jung	66 Sentman
B	59 Goldberg 85 Bradley 88 McGown 58 Farona 61) Krause 83) Lyle 77 Carper	84 Ogryzlo 59 Goldberg 85 Bradley
C	62 Brown ‡	72 Simpson


Joseph E. Earley
Professor of Chemistry
Principal Investigator
January 31, 1984

) equal ranking
no consensus
* additional review required
** assuming P-I can answer serio
questions raised by a review
‡ Category III

(Replaces preliminary report dated November 11, 1983)

Appendix VI

GEORGETOWN UNIVERSITY

DEPARTMENT OF CHEMISTRY

INTERIM TECHNICAL REPORT FOR APOSR CHEMISTRY RESEARCH-EVALUATION

CATEGORY I

A+ 36 Jonas
A 06 Hubbard
29 Bernstein

A- 37 Lit.
22) Heineman
16) Burton

B+/A-

B+ 03 Eisch
12 Frese
13 Klabunde
34 Smith
20 Johnston
39 White *
38 Chung
35 Smith

B 09 Messing
27 Paciorek
17 Smith

C 05 Pienta

CATEGORY II

43 Field
25 Williams
24 Smalley
19 Winograd *
14 Rice *

50 Thomas
49 Anderson *
30 Weisshaar
31 Eyler
32 [Kolb]*

26 Levine
15 Barker
46 Saxon

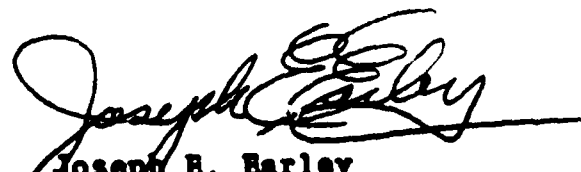
04 Weiner
51 Reeves *
40 Wodarczyk
10 Tatarchuk
44 Rosenfeld
23 McMillan

07 Kouri
42 Pritt
33 Lipps *
47 Ritchie
28 Shirts
11 Cunningham

41 Baldeschwieler

CATEGORY III

A-/B 02 West
B+/B 45 Auer*
B-/C 01 Kaplan
C 48 Hansman


Joseph E. Barley
Professor of Chemistry
Principal Investigator
May 11, 1984

) equal ranking
* additional review required